

Claims

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1. Rear axle arrangement (12) for a heavy vehicle (1), ~~e.g. a freight vehicle~~, with a number of wheels (25) which bear the vehicle (1), the vehicle (1) incorporating an elongate chassis element (5) which extends in the longitudinal direction (x) of the vehicle (1), which rear axle arrangement (12) incorporates at least one separate rear axle unit (13) which includes a load-bearing frame structure (14) and two of said wheels (25), said frame structure (14) extends between a first end region (15) and a second end region (16) in said longitudinal direction (x) and said first end region (15) of said frame structure (14) is designed to be connected to said elongate chassis element (5), and that said two wheels (25) are suspended on said frame structure (14), characterised in that said rear axle unit (13) forms a substantially self-supporting rear axle module and that any desired number, preferably two or three, of such rear axle modules can be connected to one another via said frame structure (14).

2. Rear axle arrangement (12) according to claim 1, characterised in that said frame structure (14) forms a space (17) which extends through the frame structure (14) in said longitudinal direction (x).

3. Rear axle arrangement (12) according to claim 2, characterised in that the frame structure (14) incorporates two side portions (18, 19) which are situated at a distance from one another and extend in said longitudinal direction (x), and said side portions (18, 19) are connected to one another by an upper portion (20) and by at least one lower portion (21, 22) in such a way that said portions (18, 19, 20, 21, 22) form said space (17) between them.

4. Rear axle arrangement (12) according to claim 3, characterised in that said portions (18, 19, 20, 21, 22), as viewed in the longitudinal direction (x) of the vehicle (1), form a substantially quadrilateral frame round said space (17).

5. Rear axle arrangement (12) according to either of claims 3 and 4, characterised in that each side portion (18, 19) has a lower section (23) and an upper section (24) and

the lower section (23) of each of said side portions (18, 19) is of greater extent in said longitudinal direction (x) than the respective upper section (24).

6. Rear axle arrangement (12) according to any one of claims 3 to 5, characterised in that said side portions (18, 19) are connected to one another by two lower portions (21, 22), the first lower portion (21) is arranged adjacent to the first end region (15) of the frame structure (14), and the second lower portion (22) is arranged adjacent to the second end region (16) of the frame structure (14).

10 7. Rear axle arrangement (12) according to any one of the foregoing claims, characterised in that said two wheels (25) are individually suspended in said frame structure (14).

8. Rear axle arrangement (12) according to claim 7, characterised in that each of said two wheels (25) is suspended by means of a lower link arm (27) and an upper link arm (28) which are pivotally connected to the frame structure (14).

20 9. Rear axle arrangement (12) according to claims 3 and 8, characterised in that both the lower link arms (27) and the upper link arms (28) are each pivotally connected to the respective side portion (18, 19).

10. Rear axle arrangement (12) according to claims 3 and 8, characterised in that the rear axle unit (13) incorporates a spring device (30) for each wheel (25), and each spring device (30) is connected to the upper portion (20) of the frame structure (14) and a lower link arm (27).

30 11. Rear axle arrangement (12) according to any one of the foregoing claims, characterised in that said wheels (25) are powered and a differential gear (31) is arranged in said frame structure (14).

12. Rear axle arrangement (12) according to claims 3 and 11, characterised in that said differential gear (31) is arranged in said space (17) and that each of said side portions

(18, 19) incorporates an aperture (32) through which a respective driveshaft (33) extends from the respective wheel (25) to said differential gear (31).

13. Rear axle arrangement (12) according to any of the foregoing claims, characterised in that said rear axle unit (13) incorporates a towbar (35) for attaching a trailer vehicle and that said towbar (35) is directly connected to said frame structure (14).

14. Rear axle arrangement (12) according to any one of the foregoing claims, characterised in that said rear axle unit (13) incorporates a coupling device (36) for attaching a trailer vehicle.

15. Rear axle arrangement (12) according to claims 3 and 14, characterised in that said coupling device (36) constitutes said upper portion (20).